

Application Serial No.: 09/711,362
Preliminary Amendment dated July 6, 2004
Reply to Office Action dated January 5, 2004

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A treatment apparatus, comprising:

a first hermetic chamber having a first opening;

a tube capable of inserting into the first opening, and the tube having a second opening on a side facing the first hermetic chamber and a third opening on an area where the side opposite to the first hermetic chamber with the first hermetic door being positioned between the second opening and the third opening when the tube is inserted into the first opening; and

a first hermetic door, placed outside the first hermetic chamber, capable of opening and closing the first opening, and the door being shielded from the first hermetic chamber by the tube when the tube is inserted into the first opening.

2. (Currently Amended) The treatment apparatus as set forth in claim 1, ~~further~~ comprising:

an exhaust system ~~connected to the first hermetic chamber via the first opening for~~ exhausting the first hermetic chamber via the second opening and the third opening of the tube when the tube is inserted into the first opening.

3. (Currently Amended) The treatment apparatus as set forth in claim 2,

wherein ~~the exhaust system is connected to the first hermetic chamber via the tube the~~ first hermetic chamber maintains a vacuum state when the first door is at a closing position, while the tube is allowed to be replaced.

4. (Currently Amended) The treatment apparatus as set forth in claim 1 ~~and~~ 2,

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~~wherein the tube has a third opening in an area where the side opposite to the first hermetic chamber with the first hermetic door being positioned between the second opening and the third opening when the tube is inserted into the first opening~~ the exhaust system exhausts the first hermetic chamber when the first door is at a opening position, and the exhausting system is isolated from the first hermetic chamber when the first hermetic door is at a closing position so that the tube is allowed to be replaced.

5. (Currently Amended) The treatment apparatus as set forth in claim 1, further comprising:

~~a means for regulating a temperature in the first hermetic chamber~~ cooling the tube when the tube is inserted into the first opening.

6. (Currently Amended) The treatment apparatus as set forth in claim 1, further comprising:

~~a means, placed along the inserting direction of the tube, for guiding an inserting operation of the tube~~ for regulating a temperature in the first hermetic chamber when the first hermetic door is at a opening position and a closing position.

7. (Currently Amended) The treatment apparatus as set forth in claim 1, further comprising:

~~wherein the first hermetic chamber has a plurality of the first openings, and the tube and the first hermetic door are provided at each of the first openings~~

a means, placed along the inserting direction of the tube, for guiding an inserting operation of the tube.

8. (Currently Amended) The treatment apparatus as set forth in claim 1,

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~~wherein a plurality of the first hermetic chambers are linearly arranged, said plurality of the first hermetic chambers being partitioned off by openable and closeable partitions~~ the first hermetic chamber has a plurality of the first openings, the plurality of the first openings are linearly arranged, and the tube and the first hermetic door are provided at each of the first openings.

9. (Currently Amended) The treatment apparatus as set forth in claim 1, ~~further comprising:~~

~~a second hermetic chamber adjoining the first hermetic chamber with the first hermetic door therebetween, wherein the tube is inserted into the first opening of the first hermetic chamber from the second hermetic chamber~~

wherein a plurality of the first hermetic chambers are linearly arranged, said plurality of the first hermetic chambers being portioned off by openable and closeable partitions.

10. (Currently Amended) The treatment apparatus as set forth in claim 9 1, ~~further comprising:~~

~~wherein the tube has a third opening on a side opposite to the first hermetic chamber when the tube is inserted into the first opening~~

a second hermetic chamber adjoining the first hermetic chamber with the first hermetic door therebetween, wherein the tube is inserted into the first opening of the first hermetic chamber from the second hermetic chamber.

11. (Previously Presented) The treatment apparatus as set forth in claim 10, further comprising:

an exhaust system connected to the first hermetic chamber via the second hermetic

chamber.

12. (Previously Presented) The treatment apparatus as set forth in claim 11, wherein the third opening of the tube and the exhaust system are hermetically connected when the tube is inserted into the first opening of the first hermetic chamber.

13. (Currently Amended) The treatment apparatus as set forth in claim 9 10, further comprising:

a means for performing pressure regulation in a space between the tube and the second hermetic chamber so that a pressure in the space is higher than a pressure in the first hermetic chamber when the tube is inserted into the first opening of the first hermetic chamber.

14. (Currently Amended) The treatment apparatus as set forth in claim 9 10, further comprising:

a means for performing pressure regulation in the first hermetic chamber so that a pressure in the first hermetic chamber is lower than a pressure in a space between the tube and the second hermetic chamber and higher than a pressure in the tube when the tube is inserted into the first opening of the first hermetic chamber.

15. (Previously Presented) The treatment apparatus as set forth in claim 13, wherein the means for performing pressure regulation has a means for supplying a carrier gas to a space between the tube and the second hermetic chamber.

16. (Previously Presented) The treatment apparatus as set forth in claim 11, further comprising:

a filter means placed between the second hermetic chamber and the exhaust system.

17. (Original) The treatment apparatus as set forth in claim 16,
wherein the filter means includes at least a wet filter.

18. (Currently Amended) The treatment apparatus as set forth in claim 9 10,
wherein the tube is removable, and the second hermetic chamber has a second
hermetic door that is hermetically openable and closeable for replacing the tube with a second
tube.

19. (Currently Amended) The treatment apparatus as set forth in claim 9 10, further
comprising:

a means for regulating a temperature in the second hermetic chamber.

20. (Currently Amended) The treatment apparatus as set forth in claim 9 10, further
comprising:

a means for supplying a non-oxidizing gas to the second hermetic chamber.

21-35. (Cancel)

36. (New) A treatment apparatus, comprising:

a first hermetic chamber having a first opening;

a tube capable of inserting into the first opening, and the tube having a second
opening on a side facing the first hermetic chamber;

a first hermetic door, placed outside the first hermetic chamber, capable of opening
and closing the first opening, and the first hermetic door being shielded from the first
hermetic chamber by the tube when the tube is inserted into the first opening; and

a means for cooling the tube when the tube is inserted into the first opening.